CHAUVET® LED Studio

User Manual

CHAUVET PROFESSIONAL

Edition Notes

CHAUVET® LED Studio User Manual, Rev. 2, covers the description, addressing, and troubleshooting of the VIP™ Series. CHAUVET® released this edition of the LED Studio User Manual in February 2014.

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Document Printing

For better results, print this document in color, on letter size paper (8.5 x 11 in), double-sided. If using A4 paper (210 x 297 mm), configure your printer to scale the content accordingly.

Intended Audience

Any person in charge of installing, operating, and/or maintaining the VIP™ series products should completely read through the guide that shipped with the products, as well as this manual, before installing, operating, or maintaining VIP™ series products.

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Document Revision

The LED Studio User Manual, Rev. 2, supersedes all previous versions of this manual. Discard any older versions of this manual you may have, whether in printed or electronic format, and replace with this version.

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Notes

1. Before You Begin

Manual Conventions

Convention	Meaning
<Menu>	A button, tab, or drop down menu on the product's control screen
1–512	A range of values
50/60	A set of values of which only one can be chosen
Settings	A menu option not to be modified (for example, showing the operating mode/current status)
MENU > Settings	A sequence of menu options to be followed
<ENTER>	A key to be pressed on the product's control panel
ON	A value to be entered or selected

Symbols

Symbol	Meaning
	Critical installation, configuration, or operation information. Failure to comply may make the product not work, damage it, or cause harm to the user.
	Important installation or configuration information. The product may not function correctly if this information is not used.
	Useful information.

Expected LED Lifespan

LEDs gradually decline in brightness over time, mostly because of heat. Packaged in clusters, LEDs exhibit higher operating temperatures than in ideal, single-LED conditions. For this reason, using clustered LEDs at their fullest intensity significantly reduces the LEDs' lifespan. Under normal conditions, this lifespan can be 40,000 to 50,000 hours. If extending this lifespan is vital, lower the operating temperature by improving the ventilation around the product and reducing the ambient temperature to an optimal operating range. In addition, limiting the overall projection intensity may also help to extend the LEDs' lifespan.

2. Introduction

Product Description

The LED Studio software contains various functions and capabilities. This User Manual intends to explain only those functions needed to operate the VIP™ Series of products.

Panel Addressing & Positioning

Access the panel addressing in the menu bar through **Option > Hardware** drop-down menu. All panel configuration and positioning is done in this screen.

Screen Test

LED Studio offers multiple options for testing colors and alignment to confirm that the addressing is correct. Access each of these via the menu bar using the <**TEST>** drop-down menu.

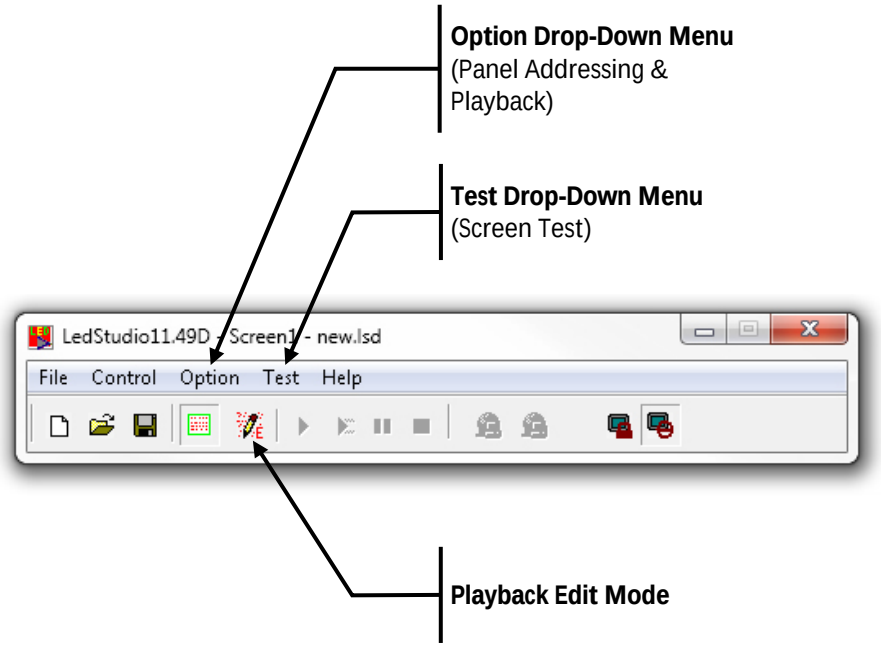
Playback Edit

The playback functions available in LED Studio are intended as additional troubleshooting tools, and not for show playback. CHAUVET® recommends Arkaos MediaMaster software, which offers numerous playback triggers, including DMX, Art-net, MA-net, MIDI, and QWERTY.

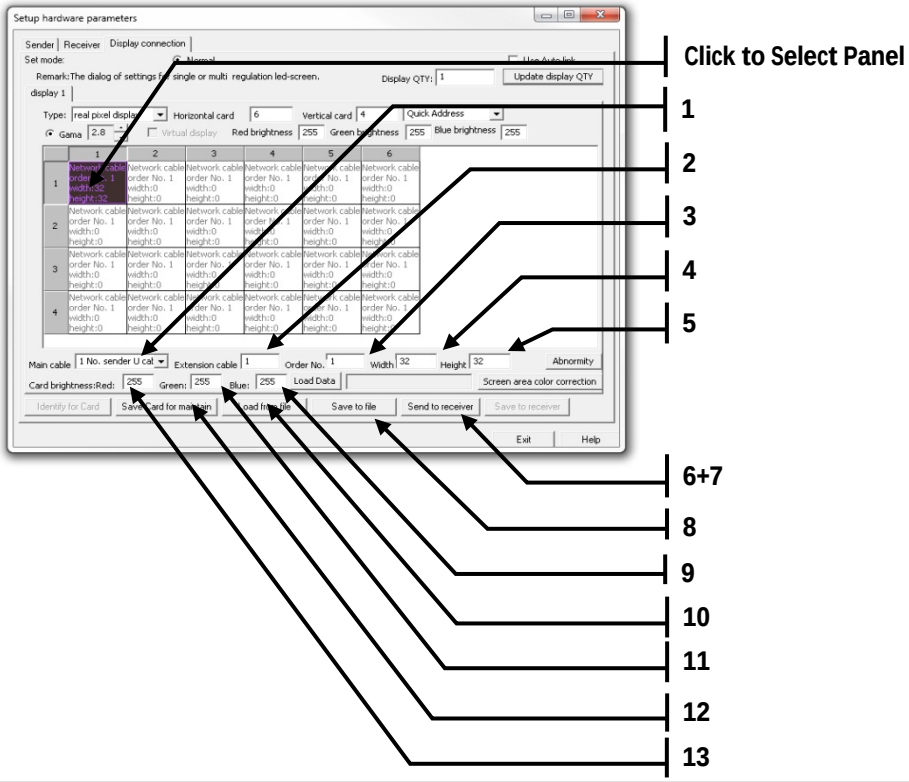
Features

- Video panel addressing software for the VIP™ Series
- PC-based, compatible with both 32-bit and 64-bit systems
- Compatible with VIP™ Drivers

Product Overview (Main Window)

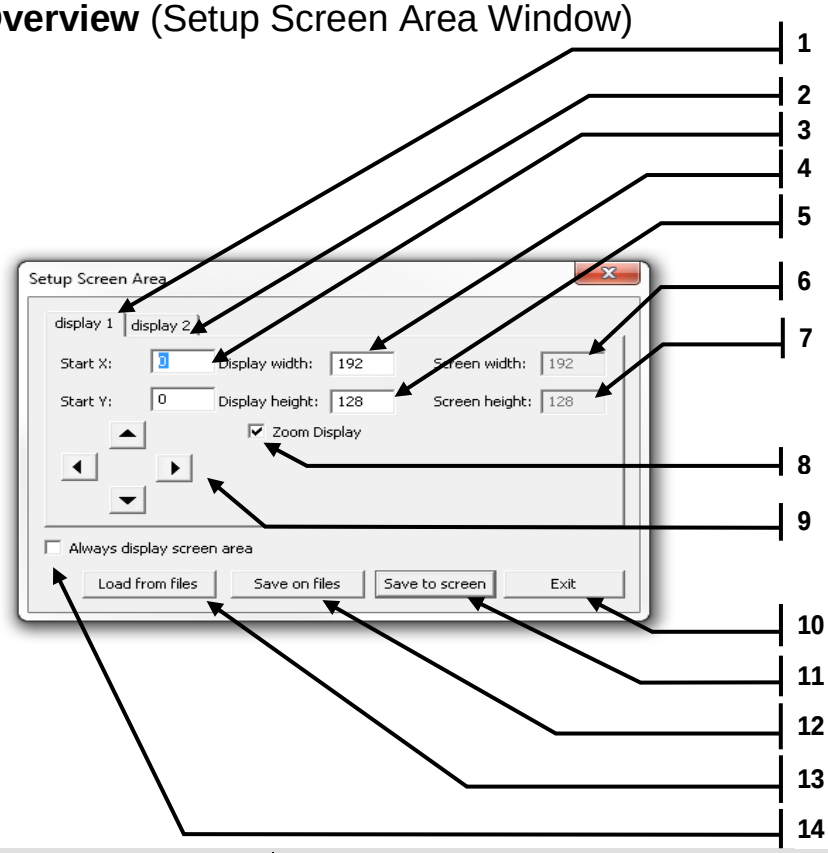


Product Overview (Setup Hardware Parameters Window)



	Title	Description
1	MVP™ Driver output port	Select the output port for the selected panel
2	Extension port/cable	Select the output of the MVP™ Signal Distributor
3	Order number	Select the order number from either the MVP™ Driver or the MVP™ Signal Distributor
4	Panel width	Select the individual panel pixel width. This may be found in the panel user manual
5	Panel height	Select the individual panel pixel height. This may be found in the panel user manual
6	Save to receiver	Once the “Save to receiver” function is successful this is used to save the configuration in the panels. This will remain even after cycling the panel power on/off.
7	Send to receiver	Once the entire configuration is complete, this is used as a temporary addressing test (not permanent). After you visually confirm that the addressing is correct, use the “Save to receiver” function
8	Save to file	Save the configuration file to a backup file
9	Panel blue intensity	Modify the individual panel maximum blue intensity
10	Load from file	Load a saved configuration file
11	Panel green intensity	Modify the individual panel maximum green intensity
12	Save card for maintenance	Save the individual panel settings for later maintenance
13	Panel red intensity	Modify the individual panel maximum red intensity

Product Overview (Setup Screen Area Window)



	Title	Description
1	Display selection	Select the display to modify
2	Start X	Select the Starting X coordinate (in pixels, on-screen) (horizontal)
3	Start Y	Select the Starting Y coordinate (in pixels, on-screen) (vertical)
4	Display width	Select the individual panel pixel width. This may be found in the panel user manual
5	Display height	Select the individual panel pixel height. This may be found in the panel user manual
6	Screen width	The physical screen width, in LED quantity
7	Screen height	The physical screen height, in LED quantity
8	Zoom display check box	This will enable the Zoom function
9	Nudge controls	This will adjust the Start X and Y values in single digits
10	Exit button	Press to Exit this screen
11	Save to screen button	Press to save settings to the video wall
12	Save on files buttons	Press to backup Setup Screen Area settings
13	Load from files button	Press to load a previously saved backup
14	Always display screen area check box	Always show the red box around the perimeter of the individual displays

3. Setup

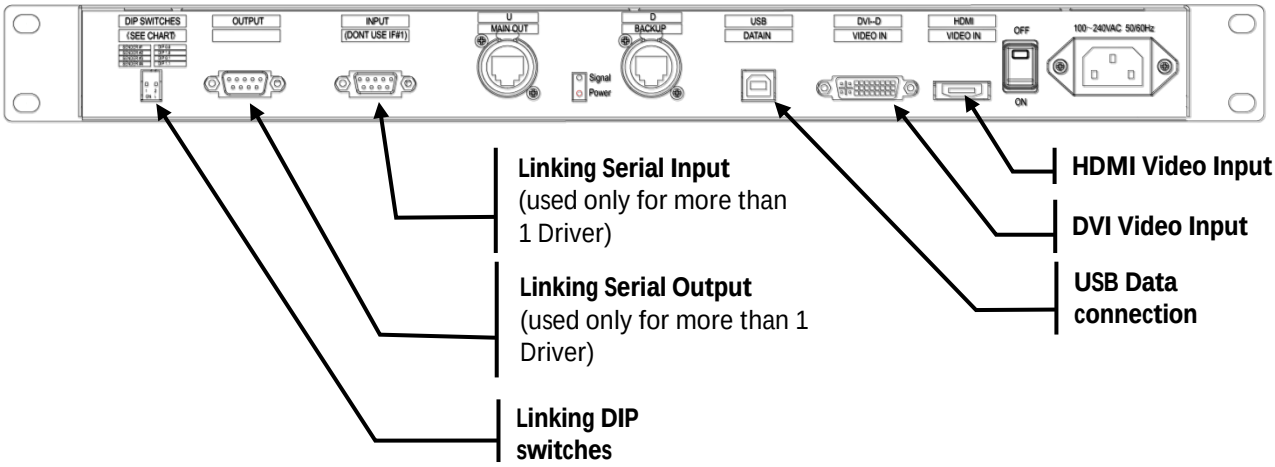
Connecting the Hardware (MVP™ Driver)

The LED Studio software works with the CHAUVET® MVP™ Driver. You may connect up to four MVP™ Drivers, each outputting up to 1280 x 1024 total video wall resolution.

Connecting a single MVP™ Driver

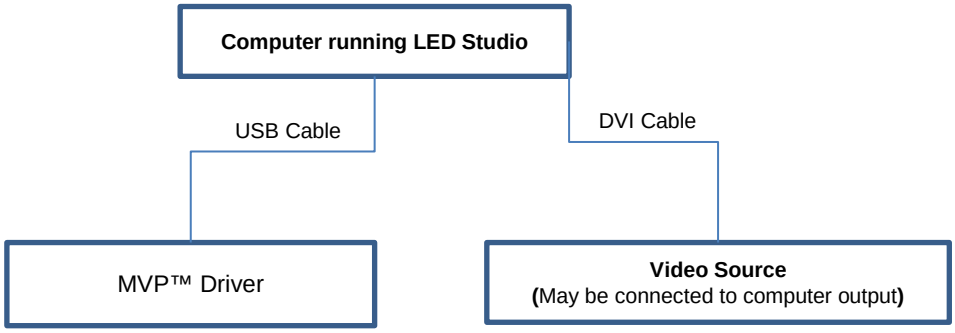
The MVP™ Driver uses the USB connection for all of the addressing and other communication to the device. You run the video separately through the DVI or HDMI connection.

1. Make sure the product power switch is OFF
2. Plug in the USB to the driver
3. Plug in the DVI/HDMI video source to the driver
4. Set the DIP switch address to [Sender #1]
5. Connect from the output of U, D, or both, depending on the desired configuration



The Signal LED indicator relates to the DVI video input source, not the USB connection.

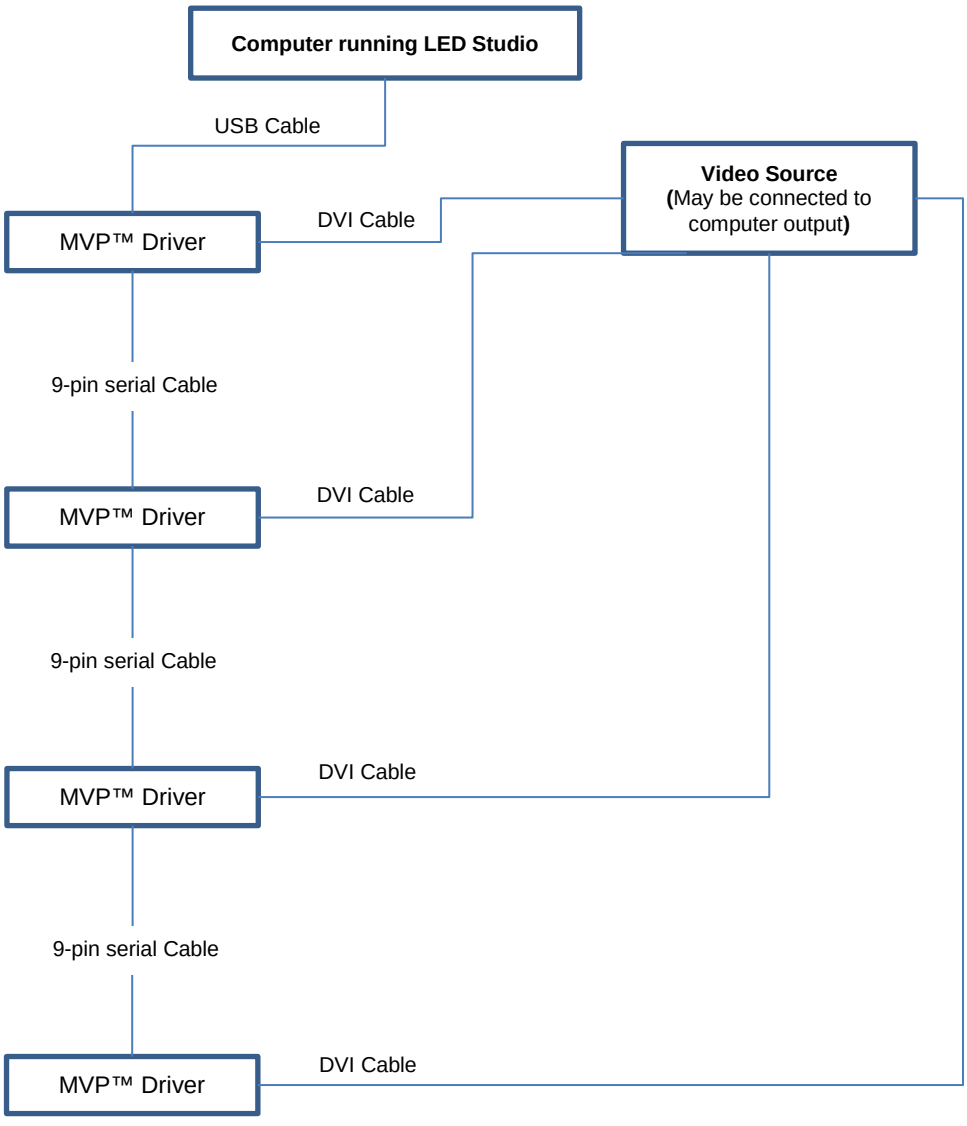
The panel quantity limitation for each of the U and D outputs is 24 panels (daisy-chained). For more panels, an MVP™ Signal Distributor is required.



Connecting Multiple MVP™ Drivers

The LED Studio software is capable of controlling up to four MVP™ Drivers simultaneously, a feature good for a larger video wall setup, or when a unique video source for each MVP™ Driver is required.

1. Make sure the product power switch is OFF
2. Plug in the USB to the driver
3. Plug in the DVI/HDMI video source to the driver
4. Set the DIP switch address to [Sender #1]
5. Connect from the output of U, D, or both, depending on the desired configuration



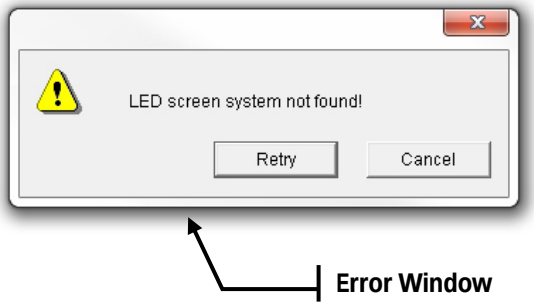
Installing the USB Hardware Drivers

The hardware drivers must be installed before the LED Studio software can communicate with the MVP™ Driver.

1. Plug the USB cable into the Windows-based computer
2. Plug in the IEC power cable and turn on the power switch
3. The Windows machine should automatically prompt you to install the hardware drivers. The current passcode is: 9291115
4. If you have not already installed LED Studio, open the application installation file that is located on the software disk that ships with the MVP™ Driver and follow the software installation steps
5. The software creates a subfolder in the LED Studio program folder directory. This folder is //Program files/LED Studio/CP210x
6. For 32-bit systems, use the //Program files/LED Studio/CP210x/x86 folder
7. For 64-bit systems, use the //Program files/LED Studio/CP210x/x64 folder
8. If you open the LED Studio software and see the following window, then the hardware drivers have not been installed properly

Troubleshooting

If you do not have the hardware drivers properly installed, the window below will appear. Try reinstalling the drivers as described in Installing the USB hardware drivers.



The driver installation utility will automatically install the drivers for 32-bit operating systems only! 64-bit operating systems require manual driver installation through the device manager in your Windows software.

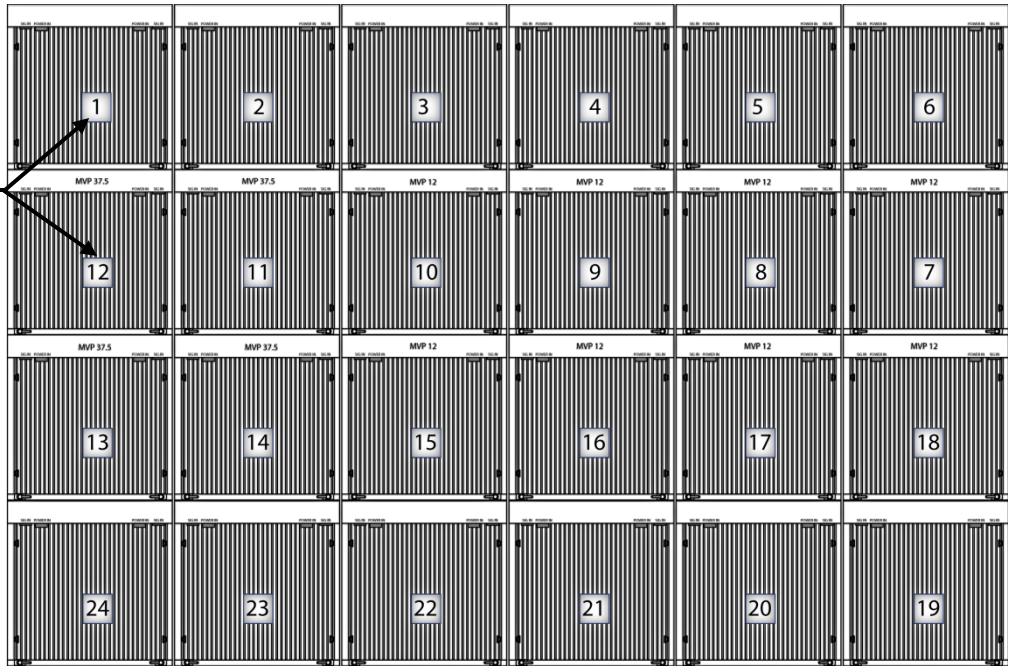
4. Addressing

Setup Options

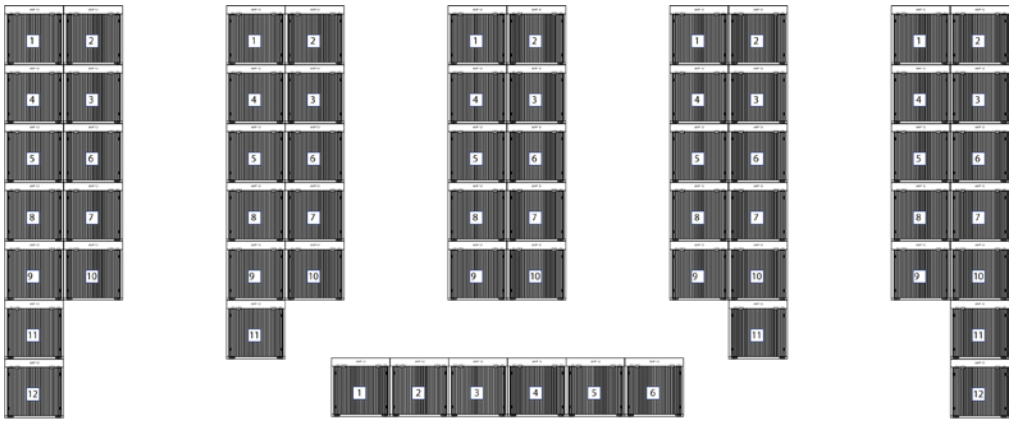
The LED Studio software allows multiple setup options. This manual describes Standard Block (Full & Quick Address), Columns/Rows with Empty Space, and Multiple Displays. The Multiple Displays option consists of two or more Standard Block or Columns/Rows with Empty Space. Elaborating on these 3 examples, makes more intricate designs possible.

Standard Block Layout

Order Number



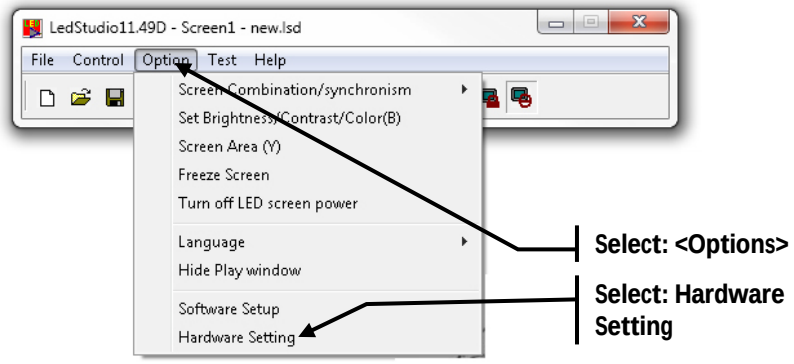
Columns/Rows & Empty Space



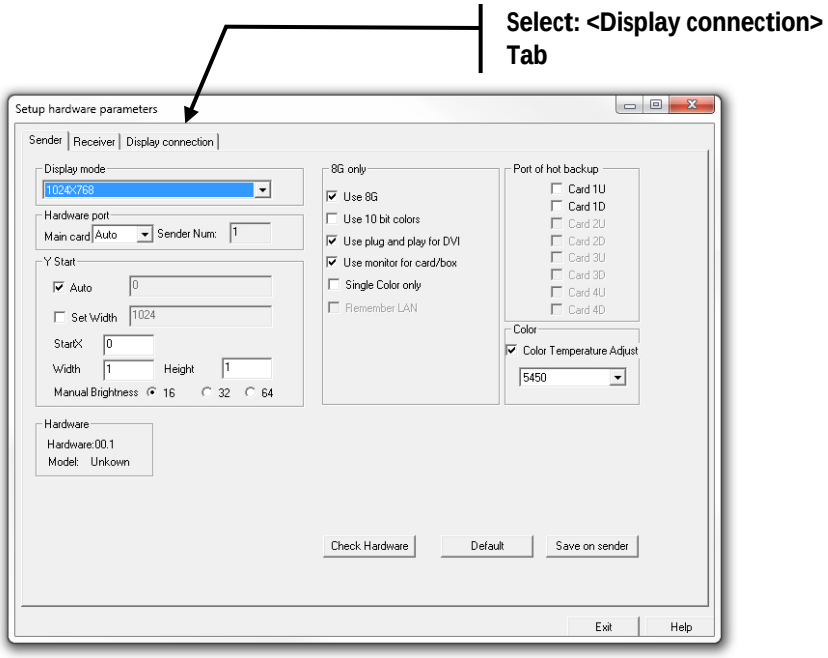
Standard Block Layout (Full Address)

The standard block layout is a basic rectangular design, with no spaces or gaps. It is constrained only by the capacity of the MVP™ Driver total resolution, which is 1280 x 1024.

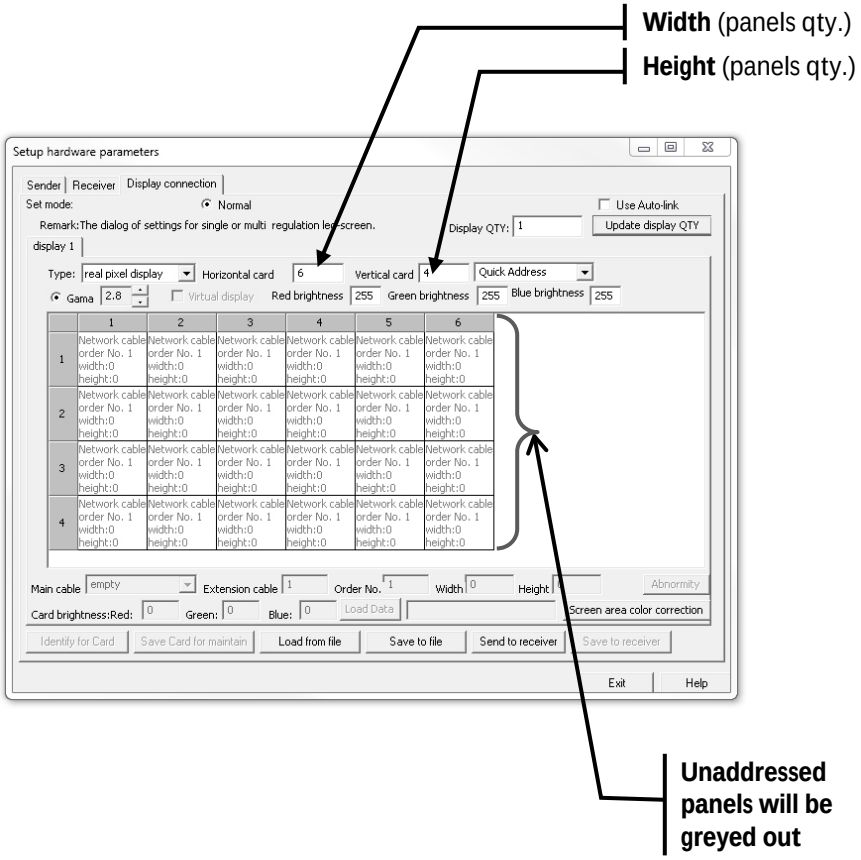
1. Open LED Studio
2. Select **Options > Hardware Setting**



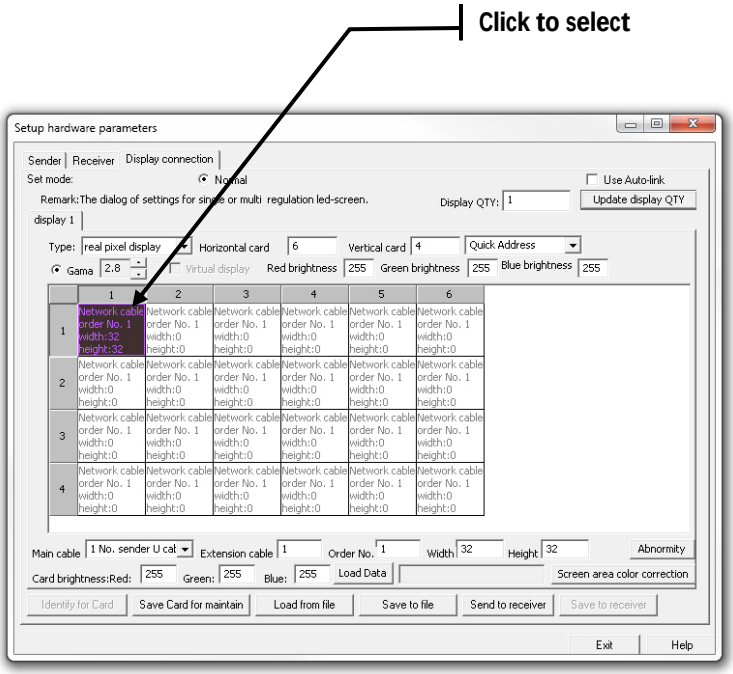
3. Select the **<Display connection>** tab



4. Set the width and height of your display (in panel quantity). In this example, the size is 6 panels wide x 4 panels high

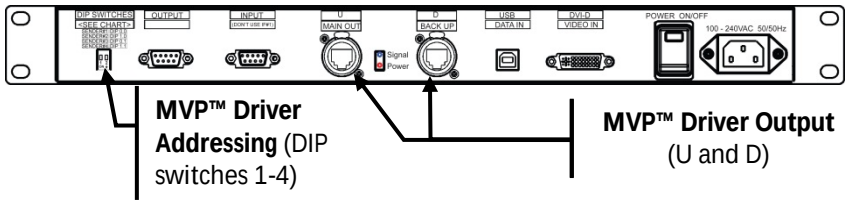


5. Click on the top, left panel to highlight its settings

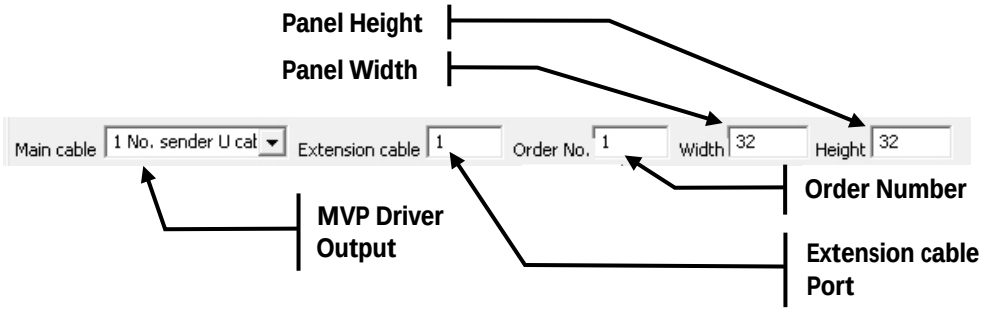


6. Set each of the following parameters of each panel:
   a. Width (different for each model panel; found in the panel's specifications)
   b. Height (different for each model panel; found in the panel's specifications)
   c. The MVP™ Driver output refers to the etherCON® connection used for the signal (U and D)

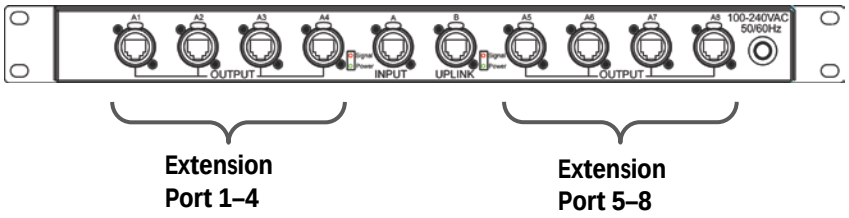
MVP™ Driver (back)



   d. The Extension port/cable port refers to which output you are using on the MVP™ Signal Distributor (if not using a MVP™ Signal Distributor, set this to "1")
   e. Order number (corresponds to the order of the panel in the daisy-chain, see next page)



MVP™ Signal Distributor (back)

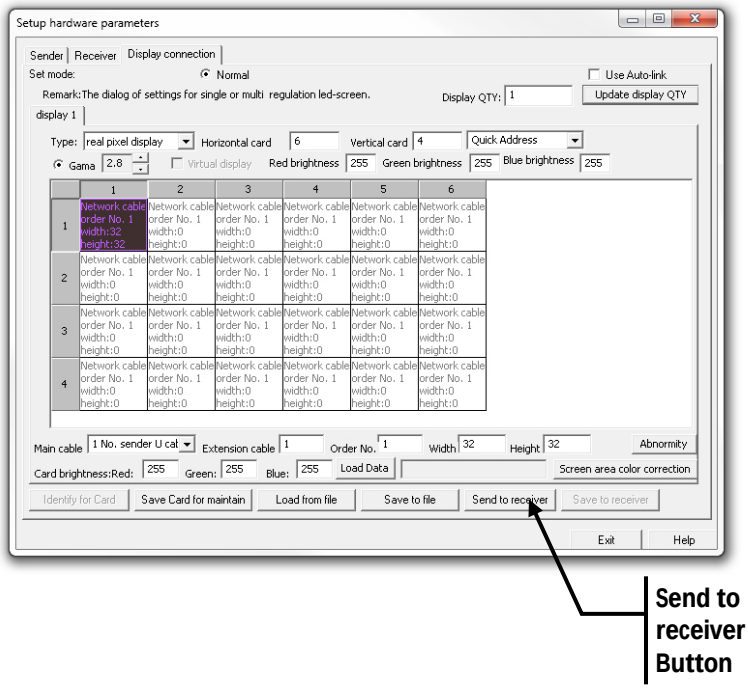


7. Set the DIP switch to assign the address, from 1 through 4

When not using the MVP™ Signal Distributor, you should set the value of the Extention cable port to 1.

This is the first physical panel connected by the signal cable (etherCON®) from the MVP™ Driver.

8. Once each panel has been addressed, press **<Send to receiver>** to test the configuration on the panels (the panels must be connected)



9. A window will appear to confirm if the setting was sent successfully. Select **<YES>**, to move onto the next step. Select **<NO>** to edit the last saved setting.
10. If your settings are correct and the panels address properly, then continue to save the configuration in the panels by pressing the **<Save to receiver>** button.

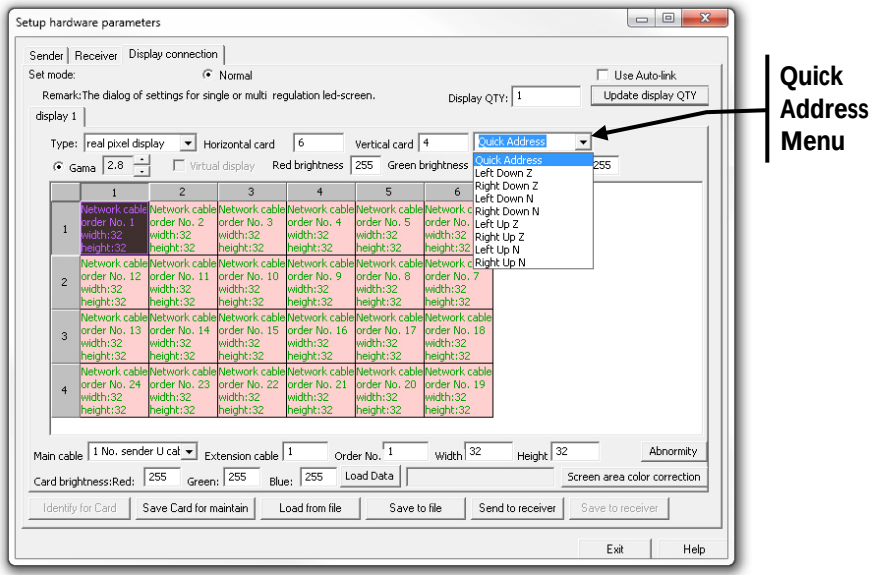
Standard Block Layout (Quick Address)

There is an option that is only available for the Standard Block layout. This is called the "Quick Address" option. Access this by using the following drop-down menu.

Please refer to Standard Block Layout (Full Address) for screen shots of steps 1–6.

1. Open LED Studio
2. Select **Options > Hardware Setting**
3. Select the **<Display connection>** tab
4. Select the width and height of your screen (in panel quantity)
5. Click on the top, left panel to highlight its settings
6. Select the top, left panel and set the following parameters:
   a. Width (different for each model panel; found in the panel's specifications)
   b. Height (different for each model panel; found in the panel's specifications)
   c. MVP™ Driver output
   d. Extension port/cable port (if not using an MVP™ Signal Distributor, set this to "1")
   e. Order number (corresponds to the order of the panel in the daisy-chain)

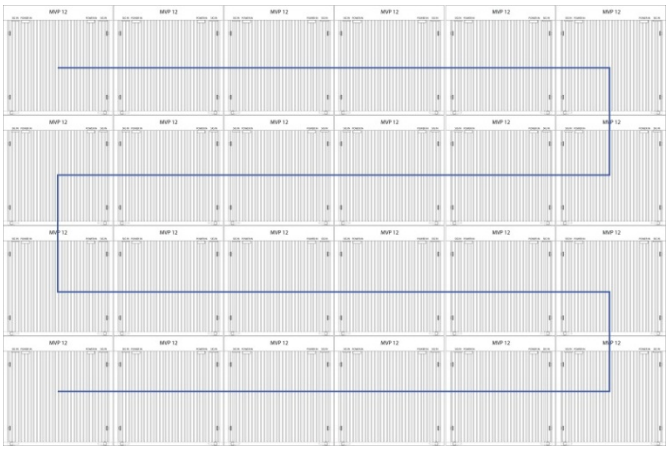
7. Select the **<Quick Address>** drop-down menu



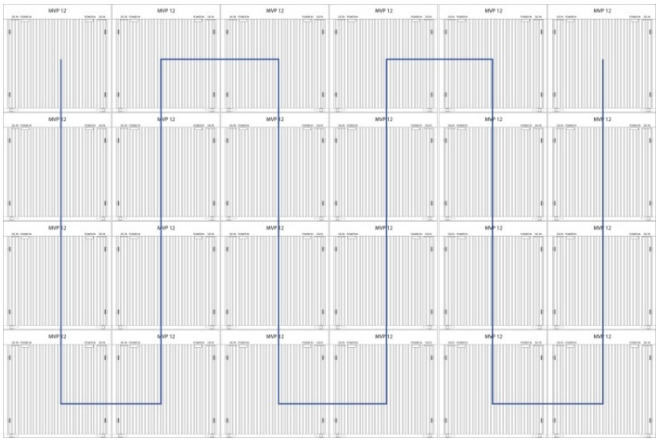
8. Choose one of the available options from the chart below for auto addressing

Function	Description
Left Down Z	Assumes a horizontal zig-zag configuration, with the first panel being the bottom, left (from the front view)
Right Down Z	Assumes a horizontal zig-zag configuration, with the first panel being the bottom, right (from the front view)
Left Down N	Assumes a vertical zig-zag configuration, with the first panel being the bottom, left (from the front view)
Right Down N	Assumes a vertical zig-zag configuration, with the first panel being the bottom, right (from the front view)
Left Up Z	Assumes a horizontal zig-zag configuration, with the first panel being the top, left (from the front view)
Right Up Z	Assumes a horizontal zig-zag configuration, with the first panel being the top, right (from the front view)
Left Up N	Assumes a vertical zig-zag configuration, with the first panel being the top, left (from the front view)
Right Up N	Assumes a vertical zig-zag configuration, with the first panel being the top, right (from the front view)

Horizontal Zig-zag



Vertical Zig-zag



Column/Row with Empty Space Layout

This layout is more complex than the Standard Block Layout. It includes spaces and gaps, which may be single panels, rows, or columns.

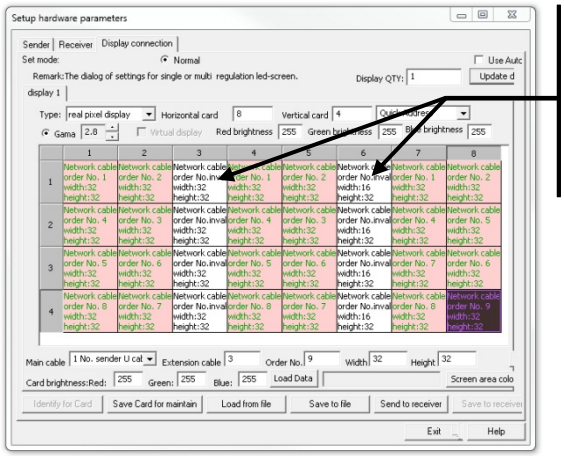
Please refer to Standard Block Layout (Full Address) for screen shots of steps1–4.

1. Open LED Studio
2. Select **Options > Hardware Setting**
3. Select the Display connection tab
4. Select the width and height of your screen (in panel quantity)

Remember to include your empty spaces in your width and height quantities for step #4.

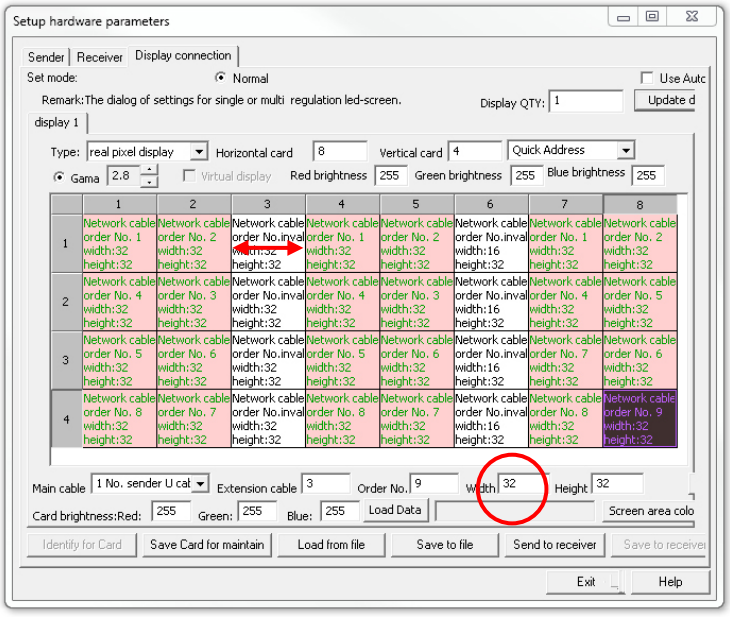
You cannot use the Quick Address options when using this type of configuration.

5. Set each of the panels with the appropriate fields, excluding the empty spaces. An example of columns with empty space



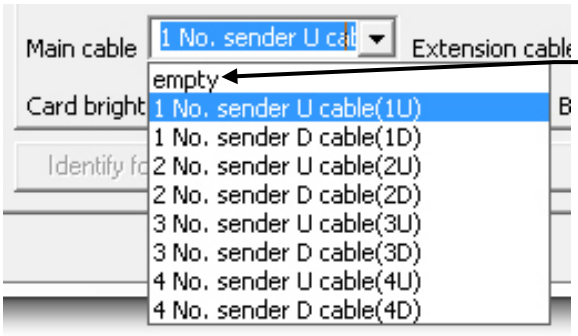
Set space between panels to "empty". In this example, there are empty columns

6. Set the width and height of the empty spaces. Keep in mind that the panel width and height refers to the physical size of the space between the panels around it
7. The size of the empty panels must be set, depending on the space needed. Use the physical space between MVP™ panels to set the width and height. For example, if you are using the MVP™ 18 (32x32 LEDs), and you have 2 ft between the columns (physical width of a single panel) you should set your empty width to "32"



In this example, the height should remain the same, regardless of how much space there is between the panels.

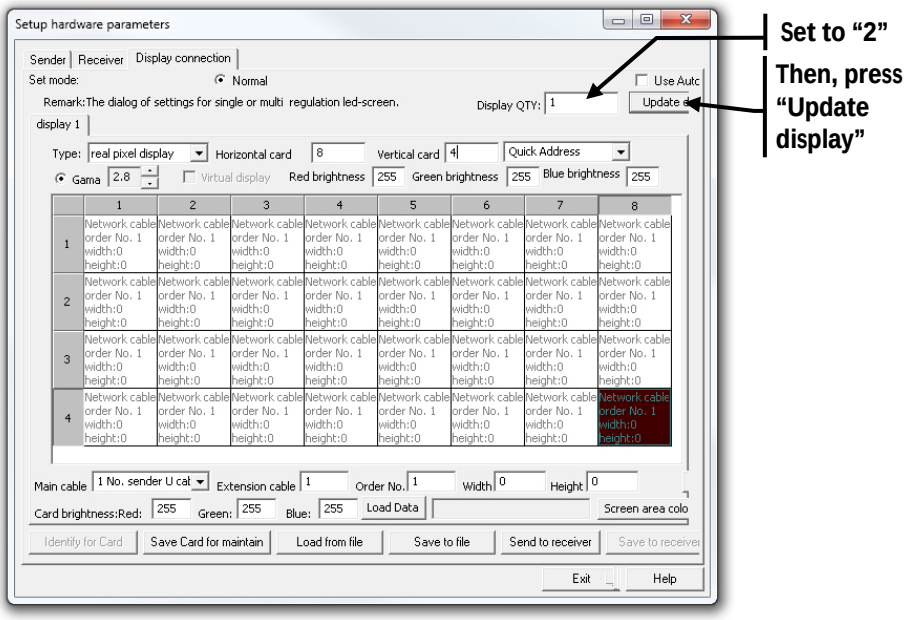
8. Once the size of the empty has been set, the panel output must be turned off. Do this by setting it to “empty” in the **<Main cable>** drop-down menu



Standard Block Layout (Multiple Display)

This setup encompasses multiple displays, each of which may be either standard block layouts or column/row layouts.

1. Create a Standard Block or Column/Row with Empty Space layouts
2. Navigate to **Options > Hardware Setting > Display connection**
3. Change the quantity of displays to “2”
4. Press **<Update display>** button



5. Select the second display, and address it (see Standard Block or Column/Row)
6. Send the addressing to the video wall by pressing **<Send to receiver>**

The display quantity is limited by the speed and memory of the graphics card of the computer.

All of the displays will overlap at the top, left corner of the screen! Refer to the Screen Area section to control the position of the displays.

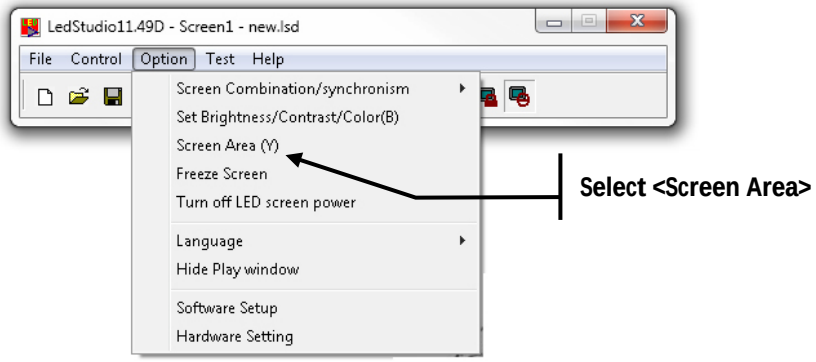
5. Customizing

Screen Area

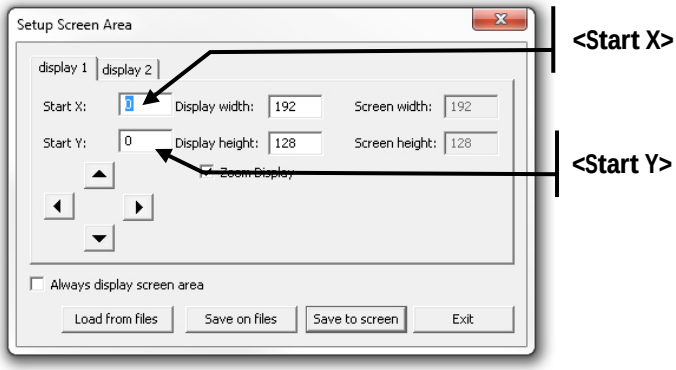
When you are using multiple displays, each display is addressed overlapping on the top, left corner of the screen. This section describes how to change the position of the different displays in LED Studio, so that you have independent control over them.

Complete the panel addressing before you perform this procedure.

1. Select **Option > Screen Area**



2. Select the display you wish to move
3. Change the values of the **<Start X>** and/or **<Start Y>** until the displays are not overlapping



4. Press the **<Save to screen>** Button. The settings are now saved to the video wall

A red box will show around the perimeter of each display. If this box is not showing correctly, then you may need to readdress the video wall.

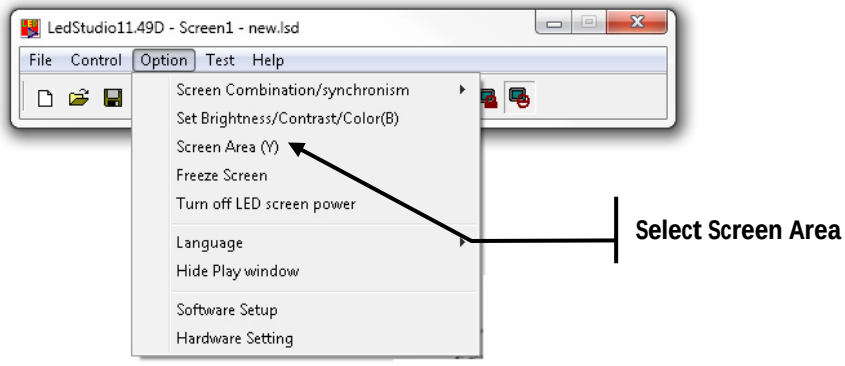
One of the displays may remain in the top, left corner of the screen. This is a Start X and Y of 0, 0.

You may also use the "nudge" controls to virtually move the displays by single digits.

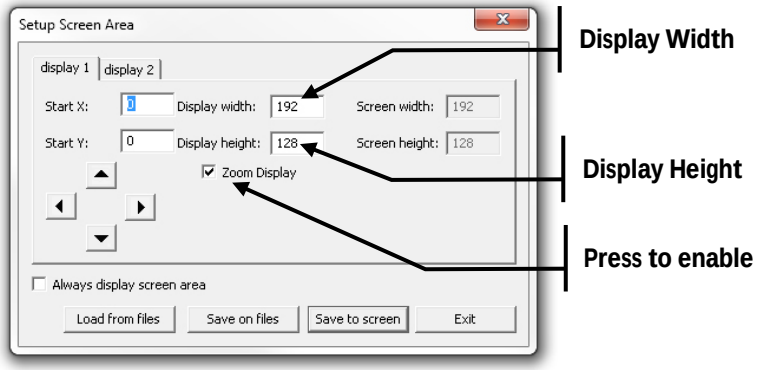
Zoom Display

The Zoom Display function becomes useful in making the video flow between multiple types of panels, with different pixel pitches. It prevents the video from “jumping” when passing between the different sections.

1. Select **Option > Screen Area**



2. Select the display you wish to move
3. Assign the positioning by following the steps in the Screen Area section
4. Click the **<Zoom Display>** check box to enable the function
5. Increase or decrease the values of the display width and/or height

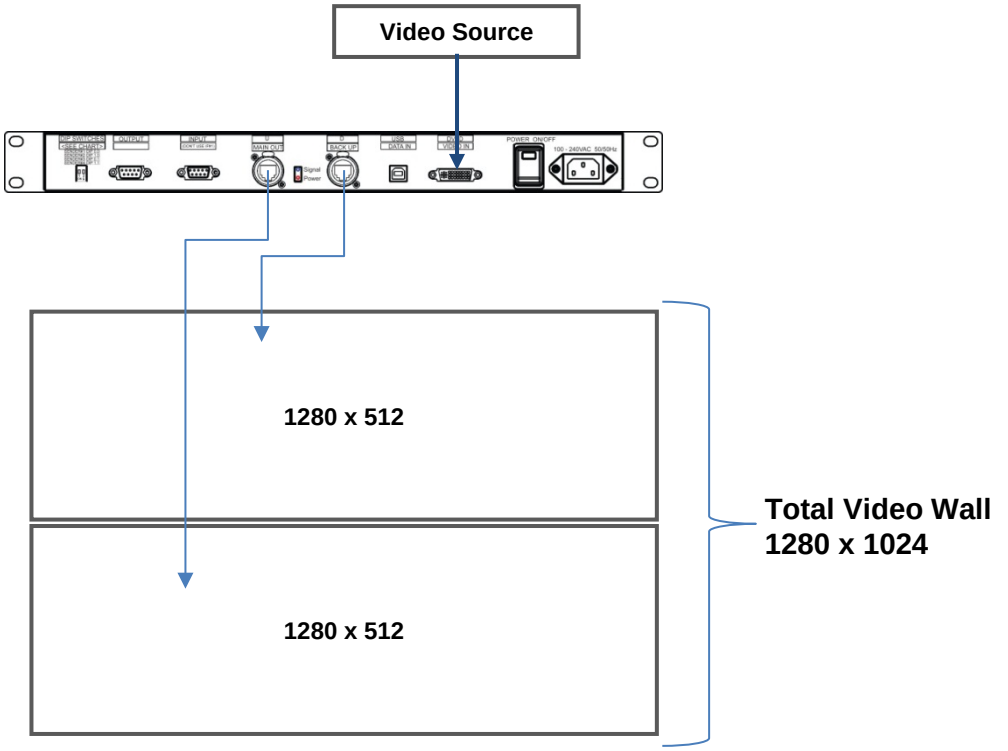


6. Press the **<Save to screen>** button. The settings are now saved to the video wall

Achieving the Maximum Resolution with the MVP™ Driver

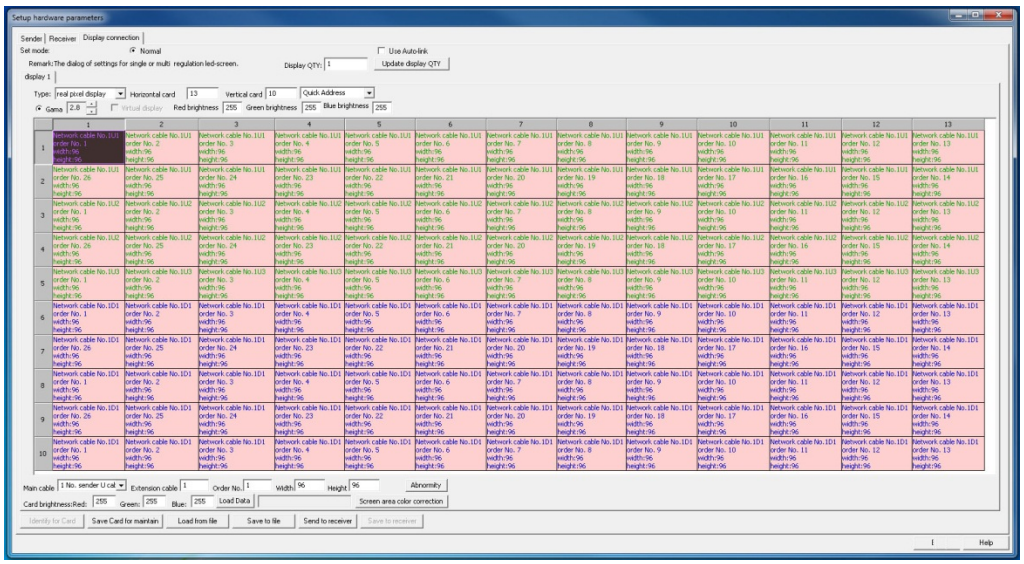
The maximum resolution of the MVP™ Driver is 1280 x 1024. This is only possible by combining a certain hardware setup and specific software settings.

1. Connect the video wall in the following configuration

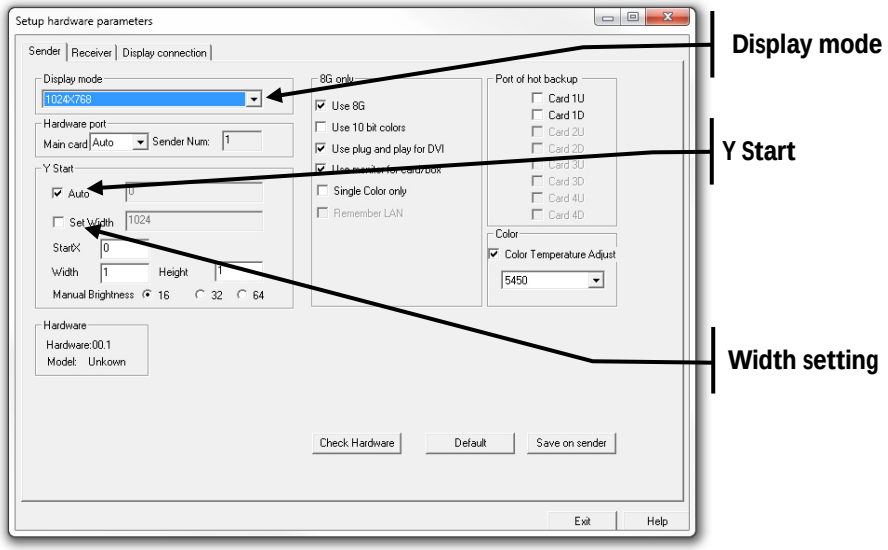


The total capacity of each signal output, whether it is U or D, is 1280 x 512. In order to achieve the full 1280 x 1024, you must use both of the outputs from the MVP™ Driver.

2. The addressing in LED Studio must match this. The sample below illustrates how this will work with panels of 96 x 96 each



3. Modify the Width setting to 1280 by clicking the **<Set Width>** check box
4. Set the **<Display mode>** drop down menu to 1280 x 1024 or higher



Depending on the video input aspect ratio, the Y Start value may need to be adjusted to compensate.

Scaling

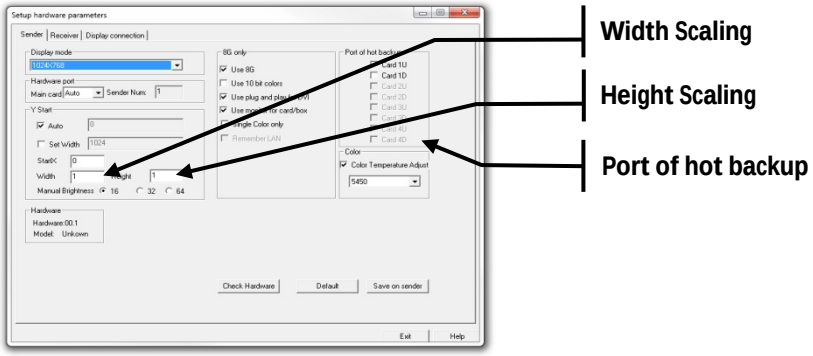
To run video from a DVD video player directly into the MVP™ Driver without using any special software or scaling equipment, scale the video input directly from the MVP™ Driver with LED studio. The video input resolution and the total width/height of the video wall are required numbers for scaling.

In this example, the video input resolution is 1024 x 768, and the video wall is 480 x 288. Scaling only works with a single Standard Block Layout.

1. Set the **<Display mode>** drop down menu to 1024 x 768
2. Determine the scaling ratios:

$$\frac{\textbf{Quantity of LEDs}}{\textbf{Video Resolution}} = \textbf{Scaling Ratio}$$

3. Input 0.468 into the width scaling text field (e.g., 480/1024=0.468)
4. Input 0.375 into the height scaling text field (e.g., 288/768=0.375)
5. Select the **<Port of hot backup>** check box(s)
6. Press **<Save on sender>**



6. Technical Information

Returns

Once an RMA Number is received, send the product prepaid, in the original box, and with the original packing and accessories. CHAUVET® will not issue call tags.

Call CHAUVET® and request a Return Merchandise Authorization (RMA) number before shipping the product. Be prepared to provide the model number, serial number, and a brief description of the cause(s) for the return.

Clearly label the package with an RMA number. CHAUVET® will refuse any product returned without an RMA number.

DO NOT write the RMA number directly on the box. Instead, write it on a properly affixed label.

Once you have received the RMA number, include the following information on a piece of paper inside the box:

- Your name
- Your address
- Your phone number
- The RMA number
- A brief description of the problem(s)

Be sure to pack the product properly. Any shipping damage resulting from inadequate packaging will be the customer's responsibility. FedEx packing or double-boxing are recommended.

CHAUVET® reserves the right to use its own discretion to repair or replace returned product(s).

Technical Specifications	
Maximum resolution (single output)	1280 x 512
Maximum resolution (single driver)	1280 x 1024
Maximum quantity of drivers	4
Required computer system	Windows PC; XP or newer; 32-bit or 64-bit Pentium 4 processor or better
Recommended computer system	Windows 7 (32-bit or 64-bit); 4GB RAM, Intel i3 processor or better or AMD equivalent, Dedicated graphics card with 1GB memory or better

Contact Us

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Outside the U.S., United Kingdom, Ireland, or Mexico, contact your dealer. Follow their instructions to request support or to return a product. Visit our website for contact details.